

NASA RECOVER Supports Wildfire Rehabilitation

Five minutes. That's how long it takes to produce a custom web map that gives the Bureau of Land Management (BLM) and other agency wildfire managers the information needed to fight an active wildfire and plan post-fire recovery.

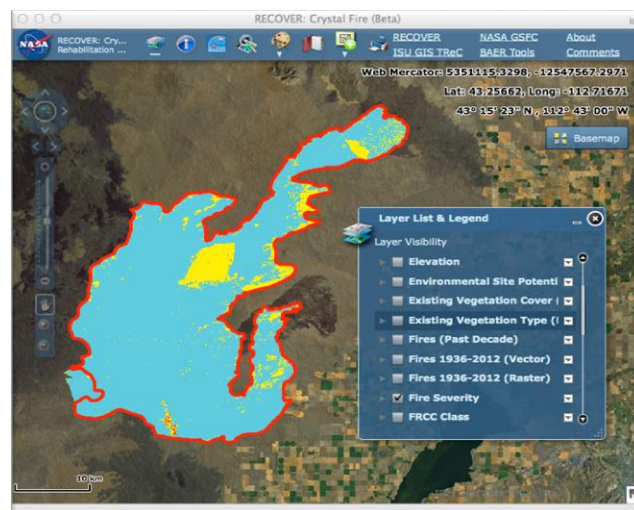
In the past, the information collected on everything from burn severity and fire intensity, to slope, vegetation, and soil type would have taken as long as a week to collect and distribute. Now the distribution of that same information – to firefighters in the field using mobile devices or analysts in offices using desktop computers – takes just minutes using the NASA Rehabilitation Capability Convergence for Ecosystem Recovery (RECOVER) system.

RECOVER was developed for the state of Idaho by NASA's Applied Sciences Program, NASA Goddard Space Flight Center, and the Idaho State University GIS Training and Research Center. Over the next three years this innovative program and wildfire tool will be expanded to cover the Western United States.

RECOVER uses NASA satellite observational data and Geographic Information System (GIS) technologies to allow managers quick access to pertinent information. Wildfire managers and firefighters now also have the ability to update GIS maps almost instantaneously using their mobile devices. ISU and NASA worked in partnership with the BLM and Idaho Department of Lands on the pilot project and will have many new partners as the program expands.

The new program was tested in 2013 on several Idaho wildfires, including the Pony and Elk Creek Complex in south-central Idaho and the Mabey Fire near Bancroft.

"The RECOVER project is an important contribution by the NASA Applied Sciences Program to the nation's wildfire management efforts," said John Schnase, senior computer scientist at the NASA Goddard Space Flight Center. "We're using a variety of advanced cloud computing, web services, and data grid technologies to dramatically improve the decision-making activities associated with fighting wildfires. We're also setting the stage to use climate model outputs and new types of observational data that will be produced by upcoming NASA missions."



RECOVER Web Map GIS Client

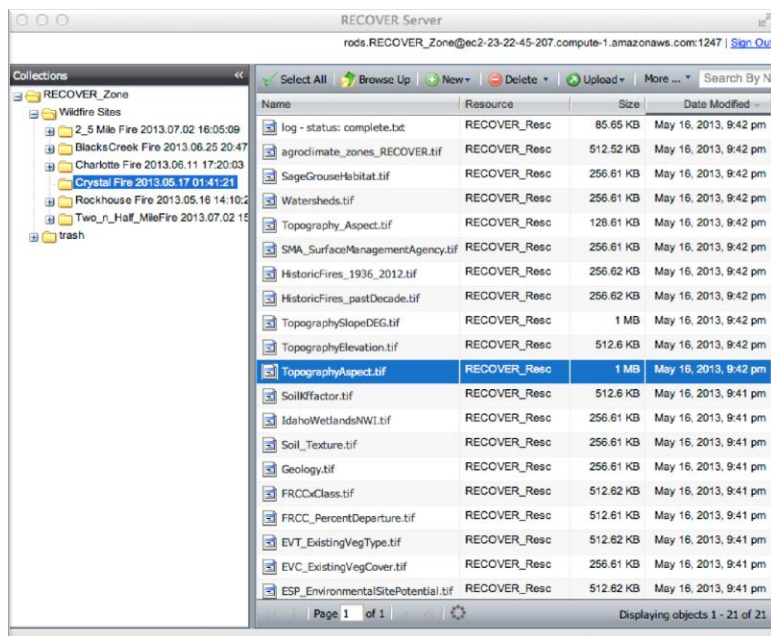


An Idaho wildfire (photo courtesy Idaho State Journal)

Discovering and Demonstrating Innovative and Practical Applications of Earth Observations



Charlotte Fire outside Pocatello, Idaho (photo courtesy Idaho State Journal)



RECOVER Cloud-Based Server

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RECOVER uses state-of-the-art cloud-based data management technologies developed by NASA Goddard Space Flight Center to improve performance, reduce cost and provide site-specific flexibility for each fire. This technology is also being used in the NASA Center for Climate Simulation (NCCS), which sets the stage for using climate data products in future versions of RECOVER.

Those accomplishments are gaining notice: BLM wildfire managers on the state, regional and national level have already contacted the ISU GIS Center expressing their excitement about the application.

“What we all are realizing as we develop RECOVER is that it has many uses beyond helping to fight wildfires,” said Keith Weber, Director of the ISU GIS Training and Research Center. “The system could be used to help with the response and recovery in any natural disaster, from landslides and earthquakes, to hurricanes and floods. RECOVER could become the framework to support management decision-making in these events and provide short- and long-term monitoring.”

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For more information on the RECOVER project, visit http://giscenter.isu.edu/research/Techpg/nasa_RECOVER/index.htm or <http://www.earthzine.org/2013/06/22/a-new-application-to-facilitate-post-fire-recovery-and-rehabilitation-in-savanna-ecosystems/>.

To view a demonstration of the RECOVER system, visit <http://www.youtube.com/watch?v=LQKi3Ac7yNU> (RECOVER Server) and <http://www.youtube.com/watch?v=SGhPpiSYpVE> (RECOVER Client).



Applied Sciences Program

<http://www.nasa.gov/applied-sciences>

